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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,976	03/12/2002	Yoshiaki Koyama	020121	9675
23850	7590	05/20/2004	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006			LAVILLA, MICHAEL E	
			ART UNIT	PAPER NUMBER
			1775	

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/069,976	Applicant(s) KOYAMA ET AL.	
	Examiner Michael La Villa	Art Unit 1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 6-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 14-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o).
Correction of the following is required: The claim terminologies "upset" and "upsets," as used in Claims 1, 3, and 14-18, are not used in the Specification.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:
3. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-5 and 14-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
 - I. Regarding Claim 1, it is unclear what is meant by the term "irregular upset surface." It is unclear what constitutes "upset." It is unclear how an "irregular upset" surface is distinguished from an "upset surface." It is unclear whether or not the claimed relationship of maximum width at the tip portion and at the base portion is necessarily to be satisfied for each projection.
 - II. Regarding Claim 3, it is unclear what is meant by the phrase "irregular projection-defining upsets." It is unclear what constitutes "upsets." It is unclear whether "irregular projections" are equivalent to "upsets." It is unclear how a surface portion can have an attribute of direction, as

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now claimed. It is unclear what is the antecedent basis of the phrase "said irregular projection-defining upsets" as there is no previous mentioning of "upsets."

- III. Regarding Claim 14, it is unclear what is meant by the phrase "as claim in claim." It is unclear what constitutes "extruded upsets forming irregular surfaces defining projections." Are these upsets that form during an extrusion process? Is this the same as "an extruded irregular upset surface defining projections" of Claim 1 or somehow further limiting thereto? It is unclear whether an "upset" is equivalent to a "projection." It is unclear what is the claimed geometrical disposition of projections. It is unclear what constitutes "mutually adjoining disposition" that is arranged axially in rows and at intervals spaced circumferentially. Are the rows or the projections to be spaced circumferentially?
- IV. Regarding Claims 15-18, it is unclear what constitutes "projection-defining upsets."
- V. Regarding Claim 16, it is unclear what is meant by the phrase "circumferentially adjoining rows." Are these "adjacent rows"? Aren't rows to be disposed axially?
- VI. Regarding Claim 18, it is unclear what is meant by the phrase "out of circumferential alignment." Does this mean that no two upsets would

be found in the same circumference along the axis of the cylindrical member?

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
6. A person shall be entitled to a patent unless –
7. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
8. Claims 1, 3, 5, 14, and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiraoka et al. JP 01-317679 for the reasons of record in the Office Action mailed on 24 October 2003.
9. Claims 1, 2, 3, 5, 14, 15, and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Toyo Kogyo Co. JP 49-44857 for the reasons of record in the Office Action mailed on 24 October 2003.
10. Claims 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kaku et al. USP 4, 154,900 for the reasons of record in the Office Action mailed on 24 October 2003.
11. Claims 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Olsson et al. USP 4,576,875 for the reasons of record in the Office Action mailed on 24 October 2003.
12. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Soell et al. USP 6,050,323 for the reasons of record in the Office Action mailed on 24 October 2003.

Response to Amendment

- I. In view of applicant's amendments and arguments, applicant traverses the section 112, second paragraph rejection of the Office Action mailed on 24 October 2003. Rejections are withdrawn except to the extent that they are provided above for the reasons given above.
- II. In view of applicant's amendments and arguments, applicant traverses the section 102 rejection over Hiraoka of the Office Action mailed on 24 October 2003. Applicant argues that Hiraoka does not teach the claimed irregular configuration. Applicant's claims may require an irregular surface, not an irregular projection, or may require an irregular surface of a projection. For the purposes of this rejection, the claim is interpreted to require a surface "defining projections projected from said surface," as stated in Claim 1. Moreover, it is not clear what would distinguish an irregular projection from one that is regular. Rejection is maintained.
- III. In view of applicant's amendments and arguments, applicant traverses the section 102 rejection over Toyo Kogyo of the Office Action mailed on 24 October 2003. Applicant argues that Toyo Kogyo teaches projections formed by rolling operations and not by extruding, as claimed. The claimed extrusion process limitation may be one of possibly more than one that would be necessary in order to obtain projections such as those of Toyo Kogyo. Applicant has not

demonstrated that extrusion steps were not or could not be used to make the article of Toyo Kogyo. Since this is an article claim and not a method claim, rejection is maintained.

IV. In view of applicant's amendments and arguments, applicant traverses the section 102 rejection over Kaku of the Office Action mailed on 24 October 2003. Applicant argues that Kaku does not teach the claimed irregular configuration. Applicant's claims may require an irregular surface, not an irregular projection, or may require an irregular surface of a projection. For the purposes of this rejection, the claim is interpreted to require a surface "defining projections projected from said surface," as stated in Claim 1. Moreover, it is not clear what would distinguish an irregular projection from one that is regular. Rejection is maintained.

V. In view of applicant's amendments and arguments, applicant traverses the section 102 rejection over Olsson of the Office Action mailed on 24 October 2003. Applicant argues that Olsson does not teach the claimed irregular configuration. Applicant's claims may require an irregular surface, not an irregular projection, or may require an irregular surface of a projection. For the purposes of this rejection, the claim is interpreted to require a surface "defining projections projected from said surface," as stated in Claim 1. Moreover, it is not clear what

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would distinguish an irregular projection from one that is regular.

Rejection is maintained.

- VI. In view of applicant's amendments and arguments, applicant traverses the section 102 rejection over Soell of the Office Action mailed on 24 October 2003. Applicant argues that Soell does not teach the claimed irregular configuration. Applicant's claims may require an irregular surface, not an irregular projection, or may require an irregular surface of a projection. For the purposes of this rejection, the claim is interpreted to require a surface "defining projections projected from said surface," as stated in Claim 1. Moreover, it is not clear what would distinguish an irregular projection from one that is regular. Applicant upon making reference to col. 4, lines 1-4 of Soell, further argues that the projections of Soell are formed by roughening. Soell, at this section, appears to teach that further treatment may include roughening to improve the joining connection. To the extent that the surface without roughening is not irregular, it would seem that such roughened surface may comprise an irregular projection surface. Rejection is maintained.

- VII. Applicant's Substitute Specification, referred to in the amendment of 26 February 2004, has been entered.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
14. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.
16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael La Villa
May 14, 2004

A handwritten signature in black ink, appearing to read 'La Villa', with a long horizontal stroke extending to the right.